

- [111] M. Payer, “Embracing the new threat: Towards automatically self-diversifying malware,”
- [112] N. Loose, F. Mächtle, C. Pott, V. Bezsmertnyi, and T. Eisenbarth, “Madvex: Instrumentation-based Adversarial Attacks on Machine Learning Malware Detection,” *arXiv e-prints*, p. arXiv:2305.02559, May 2023.
- [113] J. Cabrera Arteaga, O. Floros, O. Vera Perez, B. Baudry, and M. Monperrus, “Crow: code diversification for webassembly,” in *MADWeb, NDSS 2021*, 2021.
- [114] R. Sasnauskas, Y. Chen, P. Collingbourne, J. Ketema, G. Lup, J. Taneja, and J. Regehr, “Souper: A Synthesizing Superoptimizer,” *arXiv preprint 1711.04422*, 2017.
- [115] J. Cabrera Arteaga, P. Laperdrix, M. Monperrus, and B. Baudry, “Multi-Variant Execution at the Edge,” *arXiv e-prints*, p. arXiv:2108.08125, Aug. 2021.
- [116] J. Lettner, D. Song, T. Park, P. Larsen, S. Volckaert, and M. Franz, “Partisan: fast and flexible sanitization via run-time partitioning,” in *International Symposium on Research in Attacks, Intrusions, and Defenses*, pp. 403–422, Springer, 2018.
- [117] B. G. Ryder, “Constructing the call graph of a program,” *IEEE Transactions on Software Engineering*, no. 3, pp. 216–226, 1979.
- [118] S. Narayan, C. Disselkoen, D. Moghimi, S. Cauligi, E. Johnson, Z. Gang, A. Vahldiek-Oberwagner, R. Sahita, H. Shacham, D. Tullsen, *et al.*, “Swivel: Hardening webassembly against spectre,” in *USENIX Security Symposium*, 2021.
- [119] E. Johnson, D. Thien, Y. Alhessi, S. Narayan, F. Brown, S. Lerner, T. McMullen, S. Savage, and D. Stefan, “Sfi safety for native-compiled wasm,” *NDSS. Internet Society*, 2021.
- [120] J. Cabrera-Arteaga, N. Fitzgerald, M. Monperrus, and B. Baudry, “WASM-MUTATE: Fast and Effective Binary Diversification for WebAssembly,” *arXiv e-prints*, p. arXiv:2309.07638, Sept. 2023.
- [121] M. Willsey, C. Nandi, Y. R. Wang, O. Flatt, Z. Tatlock, and P. Panchekha, “Egg: Fast and extensible equality saturation,” *Proc. ACM Program. Lang.*, vol. 5, jan 2021.
- [122] “Stop a wasm compiler bug before it becomes a problem | fastly.” <https://www.fastly.com/blog/defense-in-depth-stopping-a-wasm-compiler-bug-before-it-became-a-problem>, 2021.

- [123] D. Cao, R. Kunkel, C. Nandi, M. Willsey, Z. Tatlock, and N. Polikarpova, “Babble: Learning better abstractions with e-graphs and anti-unification,” *Proc. ACM Program. Lang.*, vol. 7, jan 2023.
- [124] R. Tate, M. Stepp, Z. Tatlock, and S. Lerner, “Equality saturation: A new approach to optimization,” in *Proceedings of the 36th Annual ACM SIGPLAN-SIGACT Symposium on Principles of Programming Languages*, POPL ’09, (New York, NY, USA), p. 264–276, Association for Computing Machinery, 2009.
- [125] T. D. Morgan and J. W. Morgan, “Web timing attacks made practical,” *Black Hat*, 2015.
- [126] T. Schnitzler, K. Kohls, E. Bitsikas, and C. Pöpper, “Hope of delivery: Extracting user locations from mobile instant messengers,” in *30th Annual Network and Distributed System Security Symposium, NDSS 2023, San Diego, California, USA, February 27 - March 3, 2023*, The Internet Society, 2023.
- [127] Mozilla, “Protections Against Fingerprinting and Cryptocurrency Mining Available in Firefox Nightly and Beta ,” 2019.
- [128] J. Cabrera-Arteaga, M. Monperrus, T. Toady, and B. Baudry, “Webassembly diversification for malware evasion,” *Computers & Security*, vol. 131, p. 103296, 2023.
- [129] P. Kocher, J. Horn, A. Fogh, D. Genkin, D. Gruss, W. Haas, M. Hamburg, M. Lipp, S. Mangard, T. Prescher, M. Schwarz, and Y. Yarom, “Spectre attacks: Exploiting speculative execution,” in *2019 IEEE Symposium on Security and Privacy (SP)*, pp. 1–19, 2019.
- [130] M. Schwarz, C. Maurice, D. Gruss, and S. Mangard, “Fantastic timers and where to find them: High-resolution microarchitectural attacks in javascript,” in *Financial Cryptography and Data Security* (A. Kiayias, ed.), (Cham), pp. 247–267, Springer International Publishing, 2017.
- [131] G. J. Duck, X. Gao, and A. Roychoudhury, “Binary rewriting without control flow recovery,” in *Proceedings of the 41st ACM SIGPLAN Conference on Programming Language Design and Implementation*, PLDI 2020, (New York, NY, USA), p. 151–163, Association for Computing Machinery, 2020.

Part II

Included papers

